

CASE STUDY

Hoffler Place

Charleston, South Carolina

HISTORY

Charleston is the largest city in South Carolina and boasts numerous institutes of higher education within its boundaries. Unfortunately, off-campus student housing is deficient in most cities, and Charleston is no exception. Armada Hoffler Properties has built Hoffler Place, a design-build multi-use student housing project that is located at 595 King Street, right in downtown Charleston. Armada Hoffler develops, builds, owns, and manages their portfolio of properties as a Real Estate Investment Trust.

PROBLEM

Hoffler Place is a zero-lot line development, with property lines within 5 to 8 feet of adjacent operating city streets and other property lines with sensitive underground utilities in place. This made the construction of below-grade parking for the housing complex a challenge. Along with those limitations are the high ground water levels in Charleston, averaging about 5 feet below ground level.

SOLUTION

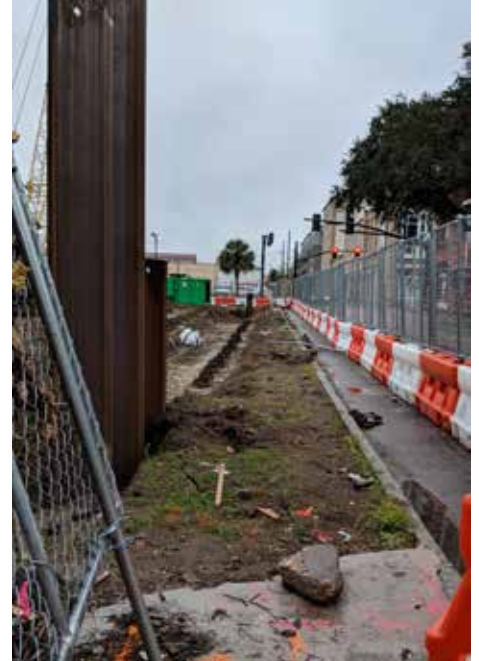
Armada Hoffler Properties contacted Parker Marine Contracting Corp., after seeing a similar project that they were working on at 405 King Street in downtown Charleston.

The project was initially designed to utilize permanent sheet piles for the two sides of the property that would support the roads and property lines, where stringent deflection requirements were in place. However, it was quickly realized by Armada Hoffler that constructing all four walls with permanent sheet piles would provide additional benefits to the building owners, as well as the design build construction team. With concrete walls for below-grade parking structures, temporary



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PROJECT PARTNERS

Owner

Armada Hoffler Properties –
Virginia Beach, VA

Architect

LS3P Associates, LLC. – Charleston, SC

Engineer

Britt Peters & Associates – Greenville, SC

Driving Contractor

Parker Marine Contracting Corp. –
North Charleston, SC

PRODUCT

AZ 14-770 and AZ 26-700

PROJECT TIME FRAME

January 2020 to March 2020

sheet piles are used for the excavation work, then they have to be removed or abandoned in place. To remove them, the foundation contractor has to bring in and remove heavy equipment such as cranes, hammers, and other specialized equipment twice. With permanent sheet piles, nothing needs to be removed, so other trades can be on the jobsite when they are needed.

Parker Marine, located in North Charleston, was contracted to install the permanent sheet pile and reached out to Nucor Skyline for their sheet pile use in blow-grade parking structures. Nucor Skyline supplied both AZ 14-770 and AZ 26-700 sheets for the project. The AZ sheet pile has the Larssen interlock system, which is known to be the most watertight interlock on the market today. To ensure the sheet piles would remain watertight, the common interlocks were seal welded prior to

shipment to the job site. The remaining joints were field welded on site.

One of the driving factors in the use of sheet pile was the requirement that student housing in Charleston needs to be open by August 1st, or the property owner must wait another year before renting any rooms. Using sheet pile instead of traditional concrete walls cut 8 weeks off the construction schedule. This time savings allowed Armada Hoffler to stay on schedule, and even make up time when there were delays on the project due to other trades. The use of sheet pile showed a significant monetary saving in time, material product, and the sequencing of trades on the project. Using sheet pile also minimized the scope of the dewatering operation.